

CLAIMS

What is claimed is:

1. An implicit floor control method for a packet-based real-time media session in
5 which a plurality of user stations exchange media via a communication server on a packet-switched network, wherein the real-time media session defines a floor that only one of the user stations can hold at any time, the implicit floor control method comprising:

the communication server beginning to receive a media stream from a given one of the user stations; and

10 the communication server responding to receipt of the media stream by granting the floor to the given user station only if no other one of the user stations currently holds the floor.

2. The implicit floor control method of claim 1, wherein the real-time media session is a half-duplex session.

15 3. The implicit floor control method of claim 1, wherein the real-time media session is a full-duplex session.

4. An implicit floor control method for a packet-based real-time media session in
20 which a plurality of user stations exchange media via a communication server on a packet-switched network, wherein the real-time media session is half-duplex and therefore defines a floor that only one of the user stations can hold at any time, the implicit floor control method comprising:

the communication server beginning to receive a first media stream from a given one of the user stations;

if another one of the user stations currently holds the floor, the communication server disregarding the first media stream; and

5 if no other one of the user stations currently holds the floor, the communication server responsively granting the floor to the given user station.

5. The implicit floor control method of claim 4, wherein granting the floor to the given user station comprises:

10 beginning to forward media of the first media stream to each other user station of the plurality of user stations engaged in the real-time media session.

6. An implicit floor control method for a packet-based real-time media session in which a plurality of user stations exchange media via a communication server on a packet-switched network, wherein the real-time media session defines a floor that only one of the user
15 stations can hold at any time, the implicit floor control method comprising:

a given user one of the user stations receiving from a user a request for the floor; and

the given user station responsively beginning to send a first media stream to the communication server as an implicit floor request.

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7. The implicit floor control method of claim 6, wherein the given user station has a floor-control request mechanism and has a wireless communication interface for wirelessly

communicating with a radio access network that provides connectivity with the packet-switched network, and wherein:

receiving the request for the floor from the user comprises detecting user actuation of the floor-control request mechanism; and

5 beginning to send the first media stream to the communication server comprises beginning to wirelessly transmit the first media stream via the wireless communication interface to the radio access network for transmission of the first media stream in turn over the packet-switched network to the communication server.

10 8. The implicit floor control method of claim 7, wherein the first media stream carries a digital representation of voice provided by the user.

9. The implicit floor control method of claim 6, further comprising:
the communication server beginning to receive the first media stream as the implicit floor
15 request; and

the communication server responsively granting the floor to the given user station if no other user station currently holds the floor.

10. The implicit floor control method of claim 9, further comprising:
20 the communication server disregarding the first media stream if another user station currently holds the floor.

11. The implicit floor control method of claim 9, wherein granting the floor to the given user station comprises:

beginning to forward media of the first media stream to each other user station of the plurality of user stations engaged in the real-time media session.

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12. The implicit floor control method of claim 6, further comprising:

while the given user station is sending the first media stream to the communication server, the given user station beginning to receive a second media stream from the communication server; and

10 the given user station treating its receipt of the second media stream from the communication server as an implicit denial of the implicit floor request.

13. The implicit floor control method of claim 12, wherein treating receipt of the second media stream from the communication server as an implicit denial of the implicit floor request comprises:

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discontinuing sending the first media stream to the communication server.

14. The implicit floor control method of claim 12, wherein treating receipt of the second media stream from the communication server as an implicit denial of the implicit floor request comprises:

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alerting a user of the given user station that the floor has been denied.

15. The implicit floor control method of claim 13, wherein alerting the user of the given user station that the floor has been denied comprises providing at least one alert selected from the group consisting of (i) an audible alert, (ii) a visual alert and (iii) a vibratory alert.

5 16. An implicit floor control method for a packet-based real-time media session in which a plurality of user stations exchange media via a communication server on a packet-switched network, wherein the real-time media session is half-duplex and therefore defines a floor that only one of the user stations can hold at any time, the implicit floor control method comprising:

10 a given one of the user stations receiving from a user a request for the floor while the user station is receiving an incoming media stream from the communication server; and

the given user station treating its receipt of the incoming media stream from the communication server as an implicit denial of the user's request for the floor.

15 17. The implicit floor control method of claim 16, further comprising:
in response to the implicit denial, the given user station alerting the user that the floor is denied.

18. The implicit floor control method of claim 17, wherein alerting the user that floor
20 is denied comprises providing the user with at least one alert selected from the group consisting of (i) an audible alert, (ii) a visual alert and (iii) a vibratory alert.

19. A communication server for bridging real-time media communications between a plurality of participants in a real-time media session, wherein the real-time media session defines a floor that only one of the participants can hold at any time, the communication server comprising:

5 means for detecting an incoming media stream from a given one of the participants; and
means for treating the incoming media stream as an implicit floor request from the given participant.

20. The communication server of claim 19, wherein the means for treating the incoming media stream as an implicit floor request comprises a processor programmed (i) to grant the floor to the given participant if no other participant currently holds the floor and (ii) to disregard the incoming media stream if another participant currently holds the floor.

21. The communication server of claim 19, wherein the real-time media communications are voice communications, and the incoming media stream is a sequence of Real-time Transport Protocol (RTP) packets.

22. A cellular mobile station comprising:

a floor-control request mechanism;

20 a processor programmed to respond to user actuation of the floor-control request mechanism by beginning to send a first media stream as an implicit floor request to a communication server.

23. The cellular mobile station of claim 22, wherein the first media stream comprises a sequence of packets carrying a digital representation of voice provided by a user.

24. The cellular mobile station of claim 22, wherein:

5 the processor is programmed to treat receipt of a second media stream from the communication server, while sending the first media stream to the communications server, as an implicit floor denial.

25. The cellular mobile station of claim 24, wherein:

10 the processor is programmed to discontinue sending the first media stream to the communication server in response to the implicit floor denial.

26. The cellular mobile station of claim 24, wherein:

the processor is programmed to alert a user about the floor denial.

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27. An implicit floor control method for a packet-based real-time media session in which a plurality of user stations exchange media via a communication server on a packet-switched network, the implicit floor control method comprising:

the communication server granting levels of floor to user stations in response to receipt of
20 media streams from the user stations and based on an order in which the communication server begins to receive the media streams from the user stations.